

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A method for ~~the production of~~ producing cell-specific retroviral vectors, the method comprising ~~the following steps:~~


- (a) immunizing a mammal with one or more cell population(s),
- (b) isolating RNA from the immunized mammal, the RNA comprising the RNA from a B cell RNA,
- (c) ~~production of~~ producing a cDNA that encodes a single chain antibody (scFv-cDNAs),
eDNA regions of the variable regions of the immunoglobulin heavy and light chain from the isolated RNA by means of RT-PCR with primers for the immunoglobulin heavy and light chain wherein the primers comprise the nucleic acid sequence for an oligopeptid linker,
- d) ~~ligation of the cDNA regions to scFv-cDNAs,~~
- e) ~~ligation of~~ (d) ligating the scFv-cDNAs into a phagemid-vector, ~~and transformation of~~
- (e) transforming a host bacterium with the phagemid vector,
- f) ~~isolation of~~ (f) isolating phages binding that bind to the cell population(s) ~~used in step~~
- (a) ~~by means of selection,~~
- g) ~~isolation of cell-specific phages from the phages obtained in step f) which only bind to the cell population(s) used in step (a) by means of a selection,~~
- h) ~~excision of~~ (g) excising the scFv-encoding DNA fragments cDNA from the cell-specific phages obtained in step g) (f) and ligation ligating the cDNA into a psi-negative retroviral Env expression vector to produce an Env-scFv expression vector,
- i) ~~transformation of~~ (h) transforming the ~~resulting~~ Env-scFv expression vector into a packaging cell, and
- j) ~~isolation of~~ (i) isolating the retroviral vectors secreted by the packaging cell.

Claim 2 (Currently amended): The method ~~according to~~ of claim 1, wherein the cell-specific phages obtained in step ~~g)~~ (f) are isolated.

Claim 3 (Currently amended): The method ~~according to~~ of claim 1, wherein the steps ~~step (f) and/or g)~~ are repeated at least once.

Claim 4 (Currently amended): The method ~~according to~~ of claim 1, further comprising the step of:

~~k)~~ (j) isolating the retroviral vectors secreted by the packaging cell, which transduce the cells of the cell population(s) by means of selection.

 Claim 5 (Currently amended): The method ~~according to~~ of claim 1, wherein the mammal is ~~selected from the group consisting of~~ a mouse, rat, guinea pig, rabbit, goat or sheep.

Claim 6 (Currently amended): The method ~~according to~~ of claim 1, wherein the cell population(s) is/are ~~selected from the group consisting of~~ man human, mouse, rat, sheep, cattle or pig.

Claim 7 (Currently amended): The method ~~according to~~ of claim 6, wherein the cell population(s) is/are ~~selected from the group comprising~~ T cells, epithelial cells, muscle cells, hematopoietic cells, stem cells, neural cells, carcinoma cells or liver cells.

Claim 8 (Currently amended): The method ~~according to~~ of claim 1, wherein the env gene of the psi-negative retroviral Env expression vector is derived from spleen necrosis virus (SNV).

Claim 9 (Currently amended): The method ~~according to~~ of claim 8, wherein the expression vector ~~is the vector having the designation pTC53,~~ comprises the nucleotide sequence of SEQ ID NO:1.

Claims 10-18 (canceled)

Claim 19 (New): The method of claim 8, wherein the expression vector consists of the nucleotide sequence of SEQ ID NO:1.

Claim 20 (New): A method for producing cell-specific retroviral vectors, the method comprising:

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- (a) immunizing a mammal with one or more cell population(s),
 - (b) isolating RNA from the immunized mammal, comprising RNA from a B cell,
 - (c) producing cDNA regions of the variable regions of the immunoglobulin heavy and light chain from the isolated RNA by means of RT-PCR with primers for the immunoglobulin heavy and light chain wherein the primers comprise the nucleic acid sequence for an oligopeptide linker,
 - (d) ligating the cDNA regions to scFv cDNAs,
 - (e) ligating the scFv-cDNAs into a phagemid-vector, and transforming a host bacterium with the phagemid vector,
 - (f) isolating phages that bind to the cell population(s),
 - (g) isolating cell specific phages from the phages obtained in step f) which only bind to the cell population(s) used in step (a) by means of a selection,
 - (h) excising the scFv-encoding cDNA from the cell-specific phages obtained in step (f) and ligating the cDNA into a psi-negative retroviral Env expression vector to produce an Env-scFv expression vector,
 - (i) transforming the resulting Env-scFv expression vector into a packaging cell, and
 - (j) isolating the retroviral vectors secreted by the packaging cell.
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